What is claimed is:

1. A method of access control in an access network infrastructure connected to a plurality of service networks, comprising the steps of:

receiving a host configuration protocol message acknowledging allocation of a network address, associated with a service network, to an authenticated network access device;

creating an entry in an address resolution protocol cache using information from the dynamic host configuration protocol message; and

restricting access to the access network infrastructure based on the entries in the address resolution protocol cache.

2. The invention of claim 1 wherein the host configuration protocol is DHCP.

3. The invention of claim 1 wherein the address resolution protocol is ARP.

4. The invention of claim 1 further comprising the step of flushing the entry in the address resolution protocol cache if the network address is released by the network access device.

5. The invention of claim 1 wherein the entry in the address resolution protocol cache has an expiration time set to an expiration time of the network address allocated to the network access device.

6. The invention of claim 1 wherein the service networks utilize the Internet Protocol and wherein the addresses are Internet Protocol addresses.

7. The invention of claim 6 wherein the plurality of service networks are operated by different Internet Service Providers.

8. The invention of claim 6 wherein the plurality of service networks offer access to different Internet Protocol-based services.